

CLUSTAL O(1.0.3) multiple sequence alignment

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PFT1_A.thaliana      -----MSSEVKQLIVVAEGTAALGPYWQTIVSDYLEKIIRSFCGSELNGERNP--
PFT1_A.lyrata        -----MSSEVKQLIVVAEGTAALGPYWQTIVSDYLEKIIRSFCGSELNGERNP--
PFT1_P.trichocarpa   -----MADKQLIVAVEGTAAMGPFWSIIVSDYLEKIIIRCYCGNETSGQKPP--
MED25_S.lycopersicum -----MVDKLIVAVEGTAVLGPYWKIIVSDYLDKIIRCFFGVDSTSQKSS--
PFT1_O.sativa        -----MAAAAAERQLVVAVEGTAALGPYWPVTVADYVEKIVRSFCAHEMAGQKLA--
MED25_H.sapiens      MVPGSEGPARGSVVADVVFVIEGTANLGPYFEGLRKHYLLPAIEYFNGGPPAETDFG-G
med25_X.laavis       ----MDAATPGNGIISDVVFVIEGTANLGPYFESLRKHYLLPAIEYFNGGPPAETDFG-G
MED25_D.melanogaster -----MEVDQIPLADVVFVIEGSAINGAYINELKTNILPTLEHFTTGSIDEREYLIA
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PFT1_A.thaliana      -VSTVELSLVIFNSHGSYCACLVRSGWTRDVDIFLHWLSSIQFGGGGFN-EVATAEGLA
PFT1_A.lyrata        -VSTVELSLVIFNSHGSYCACLVRSGWTRDVDIFLHWLSSIQFGGGGFN-EVATAEGLA
PFT1_P.trichocarpa   -TSSAELSLVTFNSHGSYCACLVRSGWTRDVDIFLHWLSAIPFAGGGFN-DAIAEGLS
MED25_S.lycopersicum -AADVEVSMVMFNTHGYPYACLVQRSGWTKDMDTFLQWLSAIPFSGGGFN-DAVAEGLA
PFT1_O.sativa        -GTPPELALVVFHTHGYPYAFVCVQRSGWTKDMNVFLSWLSGISFSGGGFN-EAAISEGLA
MED25_H.sapiens      DYGGTQYSLVVFNTVDCAPESYVQCHAPTSSAYEFVTWLDGKIFMGGGGESCSLIAEGLS
med25_X.laavis       DYGGTQYSLVVFNTVDCAPESYVQCHAPTSSAYEFVQWLDSEIKFMGGGGESCSLIAEGLS
MED25_D.melanogaster ERFATLYGIVVYRTAANLLEPVCSTYGPFLQPQKVMETIERLPLVGGGMESCAHMAEGFA
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PFT1_A.thaliana      EALMMFS--PPSGQAQPSNDLKRHCILITASNPHTLPTPVYRPRQLQVERNENGDAQAES
PFT1_A.lyrata        EALMMFS--PPSGQAQPSNDLKRHCILITASNPHTLPTPVYRPRQLQVERNENGDAQAES
PFT1_P.trichocarpa   EALMMFPITPNGNQTPNTDQQRNCILIAASNPHPLPTPVYRPRQLQVERNENGDAQAES
MED25_S.lycopersicum EALVMFSV-PNGNQTPQKMEGKKHCILISGNSPYPLPTPVYRPRQLQVERNENGDAQAES
PFT1_O.sativa        EALMILQSSNSQNHQSHVQKHCILVAASNPHYPLPTPVYRPRQLQVERNENGDAQAES
MED25_H.sapiens      TALQLFDDFKMKREQIGQT--HRVCLLICNSPPYLLPAVESTTY-----
med25_X.laavis       TALQLFDDFKMKREQIGQT--HKVCILICNSPPYLLPAVESTTY-----
MED25_D.melanogaster AAHGCFFDISERRQLLDQTSVQRHCILICNSPPYQMPPTTESWKY-----
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PFT1_A.thaliana      RLSDAETVASYFAKCSVSLSVVCPKQLPTIRALYNAGKPNQ--SADLSIDAKNTFYLV
PFT1_A.lyrata        RLSDAETVASYFAKCSVSLSVVCPKQLPKIRALYNAGKLPN--SADLSIDAKNTFYLV
PFT1_P.trichocarpa   RLSDAETVAKSFPQCSVSLSVICPKQLPKLRILIYNAGKRN--AADPPVDNIKNPHFLV
MED25_S.lycopersicum RLADAETVAKTFPQCSISLVCIPKPKLRILAIYDAGKHNR--AADPPIIDAKNPNFLV
PFT1_O.sativa        CLADAETVAKSFAQCSVSLSVVSPKQLPTLKAIIYNAKRN--AADPSVDHAKNPHFLV
MED25_H.sapiens      SGCTTENLVQQIGERGIHFSIVSPRKLPAIRLLFEKAAPPALLEPLQPTDVSQDPRHNV
med25_X.laavis       SGYTTEENLVQKIGERGIHFSIISPRKLPAIRTLFEKAMPVGLIEPQ--PKDYSQDPRHNV
MED25_D.melanogaster PGKSCEQLAALFNERNKINLSIIAPRKMPVLFKLFMKADGDQPI----TSKNYAKNIRHLV
                        * . : : :*:*:*: : : . : : :

PFT1_A.thaliana      LISENFVEACAALSHS-ATNLPQTQSPVKVDRA TVAPSIPTVGQPPAPVSSANGPIQNRQ
PFT1_A.lyrata        LISENFVEARAALSHS-ATNLPQTQSPVKVDRA TVAPSLPVTGQPPAPVTSANGPIQNRQ
PFT1_P.trichocarpa   LISENFMEARAALSRPGATSLPSNQTPVKVDIASV---TSVTGPLPASIPSVNGSITNRP
MED25_S.lycopersicum LISENFIEARAASFRLTNLASHNSPVKMDVSV---LPVSGTQSI SNANVSVISRP
PFT1_O.sativa        LLSDNFLEARTALSRPLGNLVTNHPITKMDTAATSVP---VPTSNGNPSVNGPMLTRQ
MED25_H.sapiens      LVRLGLVLPVGGGSA-PGPL--QSKQPVLPAPAS--QSKQPVLPAPAS--QSKQPVLPAPAS
med25_X.laavis       LVRLGLVLPVGGGATSVPGVM--PPKHISQPLPVV-----
MED25_D.melanogaster LLKGYSLKERAPSP--NSM--AAQMAAPNAAQATV-----QQQQQ-----QQ
                        *: :

PFT1_A.thaliana      PVSVGVPVTATVKVEPSTVTSMAVPVSPFPHIPAVARPATQAIPSIQTSSASPVSDMVSN
PFT1_A.lyrata        PVSVGVPVTATVKVEPSTVTSMAVPVNFPHIPSVARPATQPIPSIQTSSASPVSDMVTN
PFT1_P.trichocarpa   PISVGNLPTATVKVEPSTITSMANGSAFPHITSVPRPSSQGVPSMQTSSPSTTTQDMATN
MED25_S.lycopersicum PISAGNIPATVKIEPNTVTPMT-GPGFHSIPSV-RPALQPVPSLQASSPLSVSQEMVSH
PFT1_O.sativa        PNGV----VANIKTEPTTLPPMVSAFASHVTPVANGVSQGLSSVQSPSPSLISQETNLA
MED25_H.sapiens      -----GATLSAAPQQP-----
med25_X.laavis       -----PPQIASAPSHQ-----
MED25_D.melanogaster QNQAGQ-----QQQGGQMPMDTTPAQQQQQQQQ-----QQQQQQQGNPQQQVMNMN
                        :

PFT1_A.thaliana      AENAPDIKPVVVGSMTPPLRTGPPGGANVLLNLSQVRQVMS-----SAALAGAAS-
PFT1_A.lyrata        AENAPDIKPVVVGSMTPPLRTGPPGGANVLLNLSQVRQVMS-----SAALAGAAS-
PFT1_P.trichocarpa   GENAQDLKPNVSV-TTQSARSAPPAAANVILNLSQARQVMN-----SAALSGETSI
MED25_S.lycopersicum TENVQEMKPIVS-GMTQSLRPVAAAAANVKILNGVAQAHQV-----LGGGTISI
PFT1_O.sativa        NDSVQEHKPLINP-IQQSIRP--GGPANVILNLSQHRSVAT-----II--SGG-MP
MED25_H.sapiens      -----LPPVPPQYQV-P-----GN-LSAAQVAAQ---NAV-EAAKNQKAGL
med25_X.laavis       -----LPPVQPPYQV-P-----QQST-LTPAHAAAH---SAV-EAAKNQKNSP
MED25_D.melanogaster TMQQQQPGPNPPAGLLNP-----QQQQQLLQQQQQNVFVSNQMQNQNFQQNVGP

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PFT1_A.thaliana	---	SVGQSAVAMHMSNMISTGMATSLPPSQT	VFSTGQQGITS
PFT1_A.lyrata	---	SAGQSAVAMHMSNMISTGMATSLPPSQT	VFSTGQQGITS
PFT1_P.trichocarpa	GLPSINQTSVAMHMSMISSGMTSSVPA	QTVFSSGQPGVSSITGSGNLTGTTQ	----
MED25_S.lycopersicum	GLQSMGGTP---	MLSSMISSGMASSVPASQAVLSSGQSGVTTMTGAVPLAGSAQ	----
PFT1_O.sativa	GI-----	-----	PMSGTGQSIGSQQ-----
MED25_H.sapiens	-GPRF-----	SP-----	ITPLQQAAP-----
med25_X.laevnis	-SNRF-----	LLP----	NLNPMPNAP-----
MED25_D.melanogaster	GQNRW-----	MYP----	NQPGQARPPFMQAGNVGQGGGMMQ
.			
PFT1_A.thaliana	GQSPGPNNNA-FSPQTT-SNVASNLGVSQP	-----	MQGMNQG---
PFT1_A.lyrata	GQSPGPNNNA-FSPQTT-PNVASNLGVSQP	-----	MQGMNQG---
PFT1_P.trichocarpa	TPNSGLGSF-TSATSNMPGNSNLGGISQP	-----	MGNLHAGVSI
MED25_S.lycopersicum	TQNSAPSSF-TSTAPSMGQTVP-----	-----	AMSQG---
PFT1_O.sativa	VQNTAFGSN-TPI----	TGNS-NIAVSSS-----	LGGIQSNIGI
MED25_H.sapiens	APAPQLP-----	PGPPGAP-----	KPPPASQPSLV
med25_X.laevnis	PPAPTLP-----	PNASVPMVPSPS-----	LMTPASQSSLI
MED25_D.melanogaster	NPNSALISRINAPP---	PNQTVTSLQ	QQQQQQQAQQQQQQQAQQQQQQRMQLSQQQML
.			
PFT1_A.thaliana	-----	SHSGAMMQGGISMNQNMMSGLGQGNVSSGTGGMMP	TPGVGQQ--
PFT1_A.lyrata	-----	SHSGAMMQGGISMNQNIIVSGLGQGNVSSGTGGMMP	TPGVGQQ--
PFT1_P.trichocarpa	SQSAMSGLGTNPNTMSGSGAQMVQSGMGANPNTMSGLGASGVSSGSNTMI	PTPGMSQQ--	
MED25_S.lycopersicum	-----	NIPGTQMMPSGTGMNQNMMLTGLGATGLPSGTGTMMP	TPGMSQQ--
PFT1_O.sativa	SGPPVTQG-----	GSMGSTQLGQGGINTNQNMISLGT	TTVSSA-PAMMPTPGMAQQ--
MED25_H.sapiens	STV--A-----	PGSGLAP-TA-----	QPGAPS-----
med25_X.laevnis	TTV--T-----	TGPGPAP-VQLQQQGAP-----	QQPVPPS----
MED25_D.melanogaster	NHQQQLQ-----	QQQQLAQ	QQQQQQQQGQQ-----
		QQQVNP	NAGNNMPPASNAGNMSN
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PFT1_A.thaliana	AQSGIQQLGGSNSSAPNMQLSQPSSG	-----	AMQTSQSKYVKVWEGNLSGQRQGG
PFT1_A.lyrata	AQSGIQQLGGSNSSAPNMQLSQPSSG	-----	ALQTSQSKYVKVWEGNLSGQRQGG
PFT1_P.trichocarpa	VQSGMQPLGANNSAANLPLSQQTAG	-----	GLQPAQSKYVKVWEGNLSGQRQGG
MED25_S.lycopersicum	GQPGMQPVGVNSTSANMPLSQQTSG	-----	ALPSAQSKYVKVWEGNLSGQRQGG
PFT1_O.sativa	--AGVNSLGVNTSSAMNPIVQHNA	QQQQQQQQQQQQPPPKYVKI	WEGTSLSGQRQGG
MED25_H.sapiens	PSPAQ--LGAPA-----	LG--	QQSVSNKLLAWSGVLEWQEKPK
med25_X.laevnis	PQPSQPQIGTVQ-----	LPCTQT	FPVNGNKLAWSGVLEWQEKPR
MED25_D.melanogaster	PQQQQQQVGGQSNPQ-----	QQGN-PQQQQQ	QNSQQEQASLREKIWTVLEWSEKPK
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PFT1_A.thaliana	PVLI-----	TRLEGYRSASASDSLAANWPPTMQIVRLISQDHMMN	--KQYVGKA
PFT1_A.lyrata	PVLI-----	TRLEGYRSASASDSLAANWPPTMQIVRLISQDHMMN	--KQYVGKA
PFT1_P.trichocarpa	PVFI-----	TRLEGYRSASASETLAANWPPTMQIVRLISQDHMMN	--KQYVGKA
MED25_S.lycopersicum	PVFI-----	TRLEGYRSASASESLAANWPPTMQIVRLISQDHMMN	--KQYVGKA
PFT1_O.sativa	PVFI-----	CKLEGYRSGTASETLAADWPETMQIVRLIAQEHMMN	--KQYVGKA
MED25_H.sapiens	PASVDANTKLTRSLPCQVYV--	NHGENLKTEQWPQKLI-MQLIPQQLLT	TGLPLF-RNS
med25_X.laevnis	SVSDNNAKLTRSLPCQVYI--	NPGENLKTQWPQKLI-MQLIPQQLLT	TGLPLF-RNS
MED25_D.melanogaster	SDQQ----	KIPHTLQCTVCTNIKDGEPEIKAENWP	PKLL-MQLMPKHLVGNIGGQFLKDS
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PFT1_A.thaliana	DFLVFRAMSQ-----	HGFLGQLQDKKLC	AVIQLPSQTLLLSVSDKACRLIGM
PFT1_A.lyrata	DFLVFRAMSQ-----	HGFLGQLQDKKLC	AVIQLPSQTLLLSVSDKACRLIGM
PFT1_P.trichocarpa	DFLVFRAMNQ-----	HGFLGQLQDKKLC	AVIQLPSQTLLLSVSDKACRLIGM
MED25_S.lycopersicum	DFLVFRAMNQ-----	HGFLGQLQDKKLC	AVIQLPSQTLLLSVSDKACRLIGM
PFT1_O.sativa	DFLVFRTLQ-----	HGFLGQLQDKKLC	AVIQLPSQTLLLSVSDKACRLIGM
MED25_H.sapiens	RMVQFHFTNKDLES	SLKGLYRIMNGFAGCVHFP---	HT-----
med25_X.laevnis	RMVQFHFTNKDLES	SLKGLYRIMNGFAGCVHFP---	HT-----
MED25_D.melanogaster	KMVVFRP--	TPGEALDSLAKMMTSGYAGCVHFS	SIPNS-----
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PFT1_A.thaliana	LFPGDMVVFKPQIPNQ	QQQQQQQQQLHQ	QQQQQQQQQIQQQQQQQHL---
PFT1_A.lyrata	LFPGDMVVFKPQIPNQ	QQQQQQQQQLHQ	QQQQQQQQQIQQQQQQQHL---
PFT1_P.trichocarpa	LFPGDMVVFKPQISS	QQQQMQQQHHQMQQQQHPQLQ---	QLQ----
MED25_S.lycopersicum	LFPGDMVVFKPQIPNQ	QQQQQQQQQLHQ	-----
PFT1_O.sativa	LFPGDMVVFKPQVPT	QQPPMQQQQLQQQQN---	QLQQQNQLHQ---
MED25_H.sapiens	LYSSKKKIFMGLIPYDQSGFVNGIRQVITNHKQVQQQKLEQQQ	QRMGGQ-----	
med25_X.laevnis	LYSSKKKIFMGLIPNDQSGFVNGIRQVITNHKQVQM	KIDQQRN-MGAVQVG	GAGSVPAN
MED25_D.melanogaster	LYTPDRNAFLGFI	PNNQAMFVERLRKVI	QQKQHGNNMQQQQQQQMMQ-QQ
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PFT1_A.thaliana	QQH---Q-----QQQQQQHQL-----SQLQHHQQQQQ-----QQQQ---
PFT1_A.lyrata	QQQ---HQQQQMPQLQQQQQHQL-----SQLQHHQQQQQ-----QQQQ---
PFT1_P.trichocarpa	QLSQLQQQQQLSQLQQQQPQQL-----SQLQQQPQQL-----PQLQQQQQ
MED25_S.lycopersicum	-----HL-----TQLQQQPLQQL-----QQQQQQQP
PFT1_O.sativa	QQHQLQQQ-----LQQQQLQQH-----MQLQTQ---GL-----P-----
MED25_H.sapiens	-----QAPPGLGPI---LEDQARPSQN
med25_X.laavis	SGGFLQKQPGTLPVGQ-----AVSQMQGQ--QVAPGMPISQVAMMDEQQRSQN
MED25_D.melanogaster	QQQ--QQQQQQMQQDNS-QQQHYNQFQLNMQMGGGPGGGPGPGG-M-PMQQNQMQMN

PFT1_A.thaliana	-----QQQQ-----HQLTQLQHHHQ--QQQASPLNQMQQ-----TSPL
PFT1_A.lyrata	-----QQQQ-----HQLTQLQHHHQ--QQ-----Q-----TSPL
PFT1_P.trichocarpa	LSQLQ-QQQLPQM-----QQLPQMQQQQQLQQQQMQQQQQQLQQQQQQQL
MED25_S.lycopersicum	LMQLQQQQIPLQ-----SQVPQMQQQI-----HQMQQQ-----
PFT1_O.sativa	-LQQQQSQGHPLQ-----QQMQMQQQQQQQQIQMQMQQQMQMQQ-----QQQQPQ
MED25_H.sapiens	LLQLRPPQPQPQT--VGASGATGQPQPQGTAPPP--GAPQG-PPGAAS-----GPP
med25_X.laavis	LLHIRVQQPQQLAS--QAP-----PQATQSSVQAP--G-----QP-----QNP
MED25_D.melanogaster	MM--QQQRMPLGVGVGVGPGGVPNPNLQQQLQQ--VAPNVAAMQQQ-----AQQ

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PFT1_A.thaliana	-----NQMQ-----QQTSPLNMQQQQPQ--MVM--GGQA
PFT1_A.lyrata	-----NQMQ-----QQTSPLNMQQQQPQ--MVM--GGQA
PFT1_P.trichocarpa	QQQQQQMQQ-----QQQQQLQMQQ--QQQ--MVGTMGQT
MED25_S.lycopersicum	-----QIPQM-----QQQQQIPMQQQQQQP--MVTGMNQT
PFT1_O.sativa	QLQQQQPQMV-----GTGMGQQPQMVGTGMGQQPQ--MVGAGMQQ
MED25_H.sapiens	PPGPILRPQNPGANPQLRSLNPPPPQTGVPPPQASLHHLQPPGAPALLPPPHQGLGQ-
med25_X.laavis	QPGAMLRPQNPGANPQLRNLLSQQPPQSSVPQTQQPLHHMQAAQSML---PHQAMGQ
MED25_D.melanogaster	QQQRMVRFPMMSNNPGLRQLLQHQTTPGNQFRPQ-----

PFT1_A.thaliana	F-AQAPGRSQQ-GG-----GGGQPNMPGAGFMG-----
PFT1_A.lyrata	F-AQAAGRSQQ-GG-----GGGQPNMPGAGFMG-----
PFT1_P.trichocarpa	Y-VQGPGRSQL-VSQ-----GQVSSQGPANMSGGGFMSQ-----
MED25_S.lycopersicum	Y-MQGPARSQ-MSQ-----SQGSSQGLPITPGGGFMN-----
PFT1_O.sativa	Y-MQGHGRTVQQMMQKMA---PQGPGSMPGAGSMPPGGYLS-----
MED25_H.sapiens	-----P-Q-LGPPLHPPPAQSWPAQLPPRAPLPQMLLSGGPRGPVPQPLQP--
med25_X.laavis	MQHAPGQLQL-PGQSLMHQTPAQWGNMQQRAPIPGTLMSAGPRGPVPQSGLQVQA
MED25_D.melanogaster	M-----GGQNPQMAGAGPMVGNRNFDDGNYEFM-----

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PFT1_A.thaliana	-----
PFT1_A.lyrata	-----
PFT1_P.trichocarpa	-----
MED25_S.lycopersicum	-----
PFT1_O.sativa	-----
MED25_H.sapiens	-SVMEDDILMDLI
med25_X.laavis	QSVMEDDILMDLI
MED25_D.melanogaster	-----